

REMARKS

Claims 1-20 are pending in this application. Claims 12-16 and 18 have been amended as indicated hereinabove. Claims 19 and 20 have been indicated as being allowable over the prior art of record. Claims 15 and 18 were merely objected to as being dependent upon a rejected base claim, but otherwise allowable over the prior art of record. Reconsideration of claims 1-18 and indication of the allowability of claims 1-20 at an early date are respectfully solicited.

The applicant wishes to thank the Examiner for his thorough consideration of the claims of this application, and for the indication of allowability of claims 15, 18, 19, and 20. By this amendment the applicant has amended claims 15 and 18 to independent form including all of the limitations of the base claim and any intervening claims as suggested by the Examiner. Further, the applicant has amended claims 12-14 and 16 to depend from amended independent claim 18. As such, the applicant respectfully submits that claims 12-18 are now in condition for allowance. Reconsideration of these claims as amended and indication of the allowability of claims 12-20, claims 19 and 20 having previously been indicated as allowable over the prior art of record, are respectfully solicited.

The Examiner has rejected claims 1-14, 16, and 17 under 35 U.S.C. §103(a) as being unpatentable over Howell, Jr. (U.S. Patent No. 6,029,385) in view of Rankine (GB2329456). This ground of rejection is believed to be overcome with regard to claims 12-14, 16, and 17 in view of the foregoing amendments thereto changing their dependency. This ground of rejection is respectfully traversed with regard to claims 1-11 for the reasons set forth below. Reconsideration of this ground of rejection and indication of the allowability of claims 1-14, 16, and 17 in view of the foregoing amendments and following remarks are respectfully solicited.

It is axiomatic in the patent law that there must be some suggestion or motivation to modify references in an attempt to establish a *prima facie* case of obviousness. In the present application, the Examiner has modified Howell, Jr. '385 with the teachings of Rankine '456 by changing the diameter of the chamber to include a propellant portion having a second diameter smaller than the first diameter and a primer portion opening at the breach end having a third diameter larger than the second diameter sized to accommodate a primer. However, such modification of the cylinder body of Howell, Jr. '385 would render this chamber unsatisfactory for its intended purpose. As specifically set forth in MPEP §2143.01, "if proposed modification

would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In Re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir 1984)..." In this case, modifying the chamber of Howell, Jr. '385 to include a smaller diameter portion for propellant and a portion at the breach end sized to accommodate a primer would preclude the ability to use cartridge ammunition in this cylinder. However, by its very title, Howell, Jr. '385 is directed to a conversion cylinder and method "for permitting use of cartridge ammunition in cap and ball revolvers and the like."

In order to permit such use of cartridge ammunition, the internal diameter of the chambers within the cylinder cannot have a propellant portion having a second diameter smaller than the first diameter as such would preclude the insertion of the cartridge ammunition. Further, inclusion of a primer portion opening at the breach end of the cylinder having a third diameter larger than the second diameter sized to accommodate a primer would also preclude the insertion of the cartridge ammunition because a typical primer has a diameter much less than the cartridge ammunition. As such, a user would be precluded from an inserting cartridge ammunition through such primer portion into the cylinder as specifically required by the conversion cylinder of Howell, Jr. '385. The modification of Howell, Jr. '385 as suggested by the Examiner would not only render this prior art reference unsatisfactory for its intended purpose, but would in fact totally preclude operation of the cylinder for its specifically cited intended purpose of using cartridge ammunition in a cap and ball revolver. Therefore, the applicant respectfully submits that there can be no suggestion or motivation to support the proposed modification of Howell, Jr. '385 with the teachings of Rankine '456. As such, the applicant respectfully submits that a *prima facie* case of obviousness cannot be sustained with regard to claims 1-11. Reconsideration of this ground of rejection and indication of the allowability of claims 1-11 at an early date are respectfully solicited.

In addition to the above, modification of the Rankine '485 reference by including the cylinder cap of Howell, Jr. '385 also cannot be supported. Specifically, the firearm of Rankine '456 utilizes a hammer that includes a firing pin that makes contact with the primer through the firing pin hole of the recoil shield of the frame of the firearm illustrated in Fig. 1a. As such, inclusion of the cylinder cap from Howell, Jr. '385 would not fit in the frame of the revolver, and would not allow proper operation of the firing pin and the firing pin hole to contact the primer. Further, the Rankine '456 reference also describes on page 4 that the cylinder is spring-loaded to allow a slight recoil action to prevent the primer from moving out of the primer pocket and jamming the cylinder. Indeed, this reference also requires that the firearm be modified to

provide an arcuate groove around the recoil shield of the weapon to allow the cylinder to rotate should the primer be slightly set back in the primer pocket of the invention. See Rankine '456, page 4, lines 6-14. Such modifications to the gun frame itself are not required with the cylinder of the present invention, which marks a significant improvement over the Rankine '456 reference. As such, and because the inclusion of the cylinder cap of Howell, Jr. '385 would render the Rankine '456 cylinder unsatisfactory for its intended purpose, the applicant respectfully submits that a *prima facie* case of obviousness cannot be sustained against the claims of the present application. Reconsideration of this ground of rejection and indication of the allowability of claims 1-11 are therefore respectfully solicited.

In addition to the above, dependent claim 3 requires that the shoulder form a conical surface transition between the larger first diameter of the projectile portion and the smaller second diameter portion of the propellant portion. This conical surface transition is nowhere shown or suggested in either of the references relied upon by the Examiner. Instead, the Rankine '456 reference includes a step 7 between the bullet and powder chambers of the cylinder. This step 7 is not conical, but instead forms a step or shoulder to prevent the bullet from being inserted too far into the chamber and compressing the powder as described on page 5, lines 18-20 of the Rankine '456 reference. Therefore, this feature is not taught or suggested by any of the references cited by the Examiner. As such, the applicant respectfully submits that this claim is not obvious in view of the combination as all of the elements of this claim are not met or suggested by the references. Reconsideration of this ground of rejection and indication of the allowability of claim 3 for this additional reason are therefore respectfully solicited.

Additionally, claim 8 requires that the projectile portion and the primer portion of each chamber be axially offset from one another. However, as is clearly indicated in Fig. 2 of Rankine '456, the primer pocket A is in alignment with the projectile portion of the chamber. The applicant was unable to find any description that describes this primer pocket as being located anywhere but in alignment with the projectile portion. Similarly, Howell, Jr. '385 also does not describe or suggest this feature. Therefore, neither of these references alone or in combination teach or suggest this feature. As such, the applicant respectfully submits that claim 8 is in condition for allowance. Reconsideration of this ground of rejection for this additional reason and indication of the allowability of claim 8 and those claims dependent thereon are respectfully solicited.

In re Appln. Of: Kenneth P. Howell Jr.
Application No.: 10/624,773

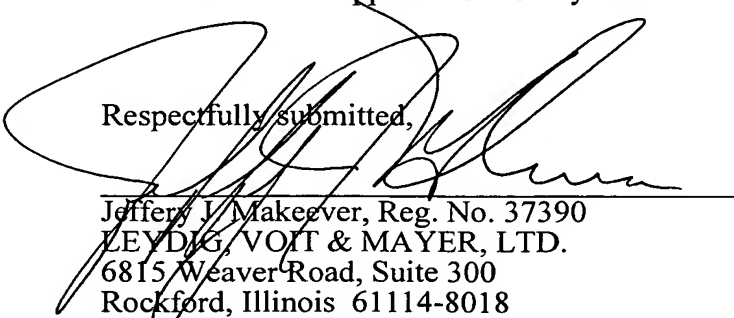
Additionally, claim 10 requires the inclusion of a loading plate adapted to cover the primer portion openings on the breach end of the cylinder body upon removal of the cylinder cap to facilitate muzzle-loading of the cylinder body. However, the applicant was unable to find any teaching or suggestion of such a loading plate in either of the cited references. Specifically, such a loading plate is superfluous in the invention of Howell, Jr. '385 as cartridge ammunition is used therein. Further, no teaching or suggestion of a loading plate is included in the description of Rankine '456. Instead, it appears that Rankine '456 relies upon the extremely small diameter of the flash hole 10 to prevent the modern smokeless powder from falling out of the breach end of the chamber during loading. In any event, neither reference contains any description or suggestion of the inclusion of a loading plate as required by claim 10. Therefore, the applicant respectfully submits that this claim 10 is patentable over the cited references for this additional reason. Reconsideration of this ground of rejection and indication of the allowability of claim 10 for this additional reason are respectfully solicited.

Independent claim 11 includes all of the details of the cylinder discussed above with regard to independent claim 1. Therefore, independent claim 11 is respectfully submitted to be patentable over the cited references for the reasons discussed above with regard to independent claim 1.

In view of the above, the applicant respectfully submits that claims 1-20 are in condition for allowance, claims 15, 18, 19, and 20 having previously been indicated as being allowable over the prior art of record. Reconsideration of claims 1-20 in view of the foregoing amendments and remarks and indication of their allowability at an early date are therefore respectfully solicited.

If the Examiner believes that a telephonic conversation will aid in the resolution of any issues not resolved herein, the Examiner is invited to contact the applicant's attorney at the telephone number listed below.

Respectfully submitted,



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